

LPS® TP Series

SURGE PROTECTIVE DEVICES



Protect sensitive data networks (RS485, RS422, LAN, $\pm 12\text{ V}$ and $\pm 24\text{ V}$) against lightning induced surges



The LPS® TP Series of surge protective devices (SPD) for data and communication lines deploy the latest state-of-the-art technology. They provide protection for all modes against lightning induced surges successfully without impairing the system's operation or causing excessive in-line resistance. These devices are specially designed with high surge capacity to suit even the most lightning prone regions in the world. The LPS® TP Series devices are ideal for most communications signals including RS485, RS422, LAN, $\pm 12\text{ V}$ and $\pm 24\text{ V}$ that use unshielded twisted pair (UTP) cables while LPS® TP-Cat 6 is for gigabit circuit.

How they work

The LPS® TP Series devices provide unsurpassed performance in lightning surge protection. They deploy multi-stage protection with GDT (Gas Discharge Tube) for primary defence. They are then linked to a second stage surge attenuation component and finally to a semiconductor voltage dependant device. When a transient surge occurs, the LPS® TP Series devices will switch to a fully conductive state to divert high current. They will then reset automatically to a non-conducting state when the current falls below the holding current.

Under excessive surge conditions, these devices will generally fail in shorted mode to earth to keep the circuit protected. For a more comprehensive protection, we recommend that the devices are installed at both ends of a data cable especially when connecting equipment are located more than 30 metres away, in adjacent buildings or outdoors. Any SPDs added to the cable will contribute some signal loss. In order to compensate the signal loss, it is recommended to reduce the maximum allowable cable length of the type of signal by 30%. All equipment and SPD earth must be linked to the system's common earth.

HIGHLIGHTS

- ▶ They protect equipment with working voltages of 5 V, 12 V and 24 V
- ▶ They come in compact sizes for easy installation
- ▶ They have minimal interferences from different earth potential between cable ends
- ▶ They provide all modes of protection – signal to earth as well as signal to signal lines
- ▶ TP Rack is a standard 19" 1U rack on which a maximum of 12 units of TP-Cat 6 can be mounted

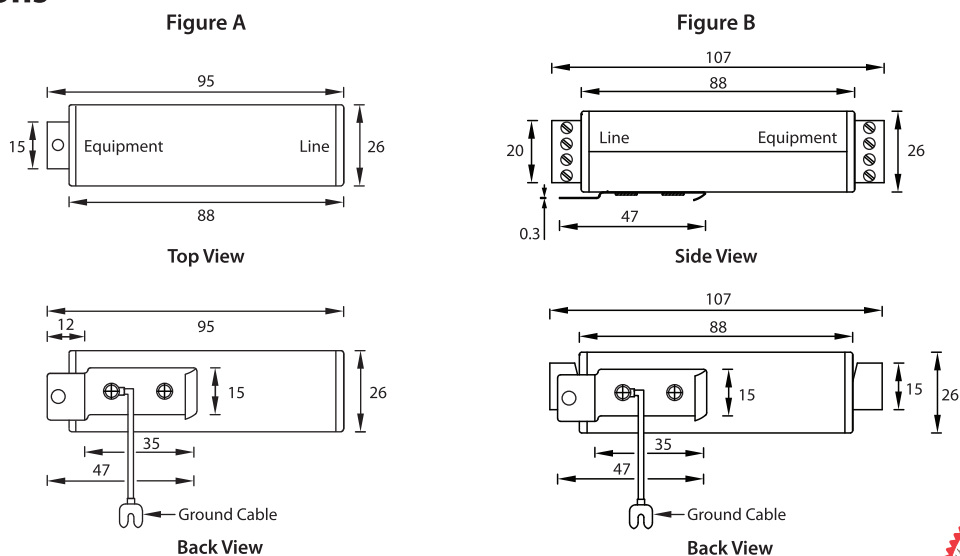


Technical Specifications

Technical Data	TP – Cat 6	TP – 4/5	TP – 4/12	TP – 4/24
Protected Wires	8	4		
Nominal Operating Signal Voltage (Line to Line)	±5 V		±12 V	±24 V
Maximum Operating Signal Voltage (Line to Line)	±7.5 V		±18 V	±28 V
1 mA Standard Clamp Voltage ± 15%	10 V DC (Line to Line)		23 V DC	40.5 V DC
	15 V DC (Line to Earth)		23 V DC	33 V DC
Let-through Voltage @ IEC 61643-21	37 V (Line to Line) @ C ₃ 74 V (Line to Earth) @ D ₁		46 V	96 V
Protection Modes	Common and Transverse Modes			
Maximum Surge Current @ 8/20 μs per wire	10 kA (Line to Earth)			
Maximum Signal Current (Line to Line)	350 mA			
- 3 db Bandwidth @ 110 Ω Circuit	DC – 150 MHz	DC – 90 MHz		
Insertion Loss @ 300 kHz	< 0.1 db	< 0.76 db		
Maximum Shunt Capacitance	< 15 pF	< 30 pF		
Cable Type	UTP / STP	2.5 mm ² (maximum size)		
Connector Interface – Line and Equipment	RJ 45	Screw Terminal		
Dimensions	Figure A	Figure B		
Operation and Storage Temperatures	- 40° C to 70° C			
Method of mounting	35 mm Din Rail / Panel Mount			
Weight	100 g			
Warranty	5 years			

Accessory	Application	Dimensions	Weight
TP Rack	Rack mounting for max. 12 units of TP-Cat 6	19" (W) 1U (H)	550 g

Dimensions



All dimensions
in millimetres

All the above specifications are subjected to changes without prior notice.
Customised products are available upon request.

Awarded the National Mark of
Malaysian Brand 2015



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